

REMARKS

Claims 1-15 are pending in this application. Claim 1 is amended herein. Claims 16-20 are canceled. The amendments and remarks herein are believed to place the claims and this application in a condition for allowance, or alternatively, to place the claims in a better condition for appeal. Applicants respectfully request entry of the amendments and reconsideration of the claims in view of the following remarks.

Applicants thank the Examiner for the courtesy extended during the telephone interview of November 7, 2005 to discuss the Office Action mailed September 13, 2005.

Claim 1 is amended herein to clarify the amendments made previously, and now specifically recites:

... filling the relief structures with a resist in physical contact with the substrate within the trench structures and subsequently isotropically etching the resist to remove the resist to a relief depth, wherein a resist layer is obtained;...

Claims 1 and 8-20 were rejected under 35 U.S.C. § 103 as being unpatentable over Schrems et al. (U.S. Patent No. 6,200,873) in view of Klaus et al. "Atomic Layer deposition of SiO₂ Using Catalyzed and Uncatalyzed Self Limiting Surface Reactions". This rejection is hereby respectfully traversed.

Schrems et al. discloses a method for forming a trench with a collar using a polysilicon sacrificial layer formed in a trench with an oxide liner. The Examiner refers to Col. 18 at lines 16-25 where the reference suggests using photoresist. The Examiner admits that Schrems does not provide the elements of a low temperature ALD method where the low temperature method is performed at a temperature lower than a softening temperature of the resist, and adds Klaus to the primary reference to provide the missing low temperature method steps.

Applicants submit that even if the clear teaching by Schrems that the material used to fill the trench have temperature stability up to 1100 degrees C (Col. 4 lines 55-60) is set aside to accept the possibility that photoresist could be used instead of polysilicon in this higher temperature method, and assuming *arguendo* that the combination of references made by the Examiner is suggested by the references, the elements of claim 1 are not shown, taught or suggested by the combination. Claim 1 now requires that the resist filling the relief structures is in physical contact with the substrate within the trench. Schrems teaches an oxide layer formed in the trench prior to the filling with the sacrificial layer. Klaus et al. does not provide the required element. Accordingly, Applicants believe that the claimed method is allowable over the references singly or in the combination proposed in the rejection. Reconsideration and allowance are therefore respectfully requested.

Claims 8-15 depend from and add additional method steps on the steps of claim 1. As claim 1 is now believed to be allowable, these dependent claims are also believed to incorporate method steps that are not shown, taught or suggested by the prior art references relied upon in the rejection. Accordingly, reconsideration and allowance are requested. Claims 16-20 are canceled herein.

Claims 2-6 were rejected under 35 U.S.C. § 103 as being unpatentable over Schrems et al (U.S. Patent No. 6,200,873) and Klaus et al. further in view of Nguyen. This rejection is also hereby respectfully traversed.

The Examiner admits that the combination of Schrems and Klaus does not provide all of the claimed steps and then adds Nguyen to the combination for the elements added by these dependent claims.

Applicants submit that claims 2-6 depend from and incorporate the allowable steps of claim 1, as described above, and that the combination proposed by the Examiner does not show, teach or suggest these elements. Accordingly, each of these dependent claims recites allowable method steps and is allowable over the rejection. Reconsideration and allowance is therefore respectfully requested.

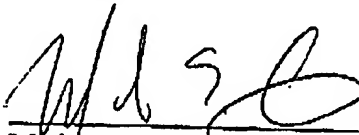
Claim 7 was also rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Schrems, Klaus et al. and Nguyen, and further in view of Schrems (U.S. Patent No. 6,500,707). This rejection is also hereby respectfully traversed.

Claim 7 recites a layer comprised of, *inter alia*, Al_2O_3 . The Examiner admits that this material is not taught by the three references relied upon above and so adds the additional Schrems patent for this element.

Without agreeing that the combination of four references to reach the steps of claim 7 as proposed by the Examiner in fact obviates the steps recited in this dependent claim, Applicants submit that as claim 7 also depends from and incorporates the method steps of claim 1, claim 7 is also allowable over the references and the rejection as discussed above. The combination of references does not show, teach or suggest the allowable method steps of claim 1 and therefore also claim 7, and accordingly, reconsideration and allowance are requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Mark E. Courtney, Applicants' attorney, at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge Deposit Account No. 50-1065.

Respectfully submitted,



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Date

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